

## REMARKS

The Applicants would like to thank the Examiner for discussing the amendment to the claims made herein in a telephonic interview of June 7, 2007 and agreeing to prepare an Interview Summary for the record. Consistent with the telephonic interview, claims 1-16 have been cancelled without prejudice. Claim 17 has been added and is directed to the specific example shown as having unexpected favorable results in data set 1 and data set 2 in the application as filed and discussed in the response filed October 30, 2006. For the reasons stated below, it is respectfully asserted that the present amendment places the above-referenced application in condition for allowance and such action is respectfully requested.

In the Office Action, Claims 7-8 and 13-16 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. In view of the fact that these claims have been cancelled this rejection is now moot. In addition, claims 15 and 16 have been rejected under 35 U.S.C. § 112, second paragraph. Similarly, since claims 15-16 have been cancelled, this rejection is now moot. Finally, the rejections of all or part of claims 1-3, 5-11 and 13-16 under 35 U.S.C. §103(a) as allegedly being unpatentable over Fearing ('534 or '633) in view of Keppler et al. ('612) and/or over Sicken et al. ('965) in view of Keppler et al. ('612) have been maintained. In the response filed October 30, 2006, the Applicants argued that the data provided in the specification at pages 8-16 and summarized by Applicants in the two tables provided herein below show that the particular flame retardant blends of the present invention when used in polyurethane foams provide unexpected synergistic and advantageous effects at different foam densities. It is believed that this showing of unexpected results is sufficient to overcome

any *prima facie* case of obviousness. We further note that the Board of Appeals stated at page 15 of the Decision on Appeal dated February 10, 2006, that the Appellants have not argued unexpected results, although the data summarized below was clearly set forth in the original application. Applicants herein, at least in part, base the present argument of non-obviousness on unexpected results.

Data Set 1 @ 1.8 pcf

Parts per Hundred necessary to pass test

TB-117 Test			MVSS 302 Test	
Flame Retardant	Actual	Theoretical	Actual	Theoretical
100% BTPP	16	16	14	14
BTPP:PEEOP 1:1	5	10.5	5	9
100%PEEOP	5	5	4	4

Data Set 2 @ 1.8 pcf

% FR necessary to pass test in foam

TB-117			MVSS 302	
FlameRetardant	Actual	Theoretical	Actual	Theoretical
100% BTPP	1.36	1.36	1.19	1.19
BTPP:PEEOP 1:1	0.69	1.15	0.69	0.97
100%PEEOP	0.95	0.95	0.76	0.76

As illustrated by the data above, 1:1 blends of BTPP:PEEOP additives provide a synergistic effect when added to polyurethane foam since the actual amount of flame retardants of the blends required to be added to a polyurethane foam in order to pass the California TB-117 flame retardancy standardized test (TB-117 test) and/or the MVSS 302 flame test used by the automobile manufactures (MVSS-302 test) was unexpectedly less than what would have been predicted from a simple mathematical theoretical calculation of the same blends. For example, in data set 1 above, a polyurethane foam containing a 1:1 BTPP:PEEOP blend passed the TB-117 test at 5 parts in 1.8 pcf foam whereas the theoretical amount, calculated by taking the average of the amounts required to pass the test of the two neat components, was 10.5 parts. In other words, the actual amount necessary to pass this test was less than half the theoretical amount thereby clearly demonstrating the unexpected synergistic effect of the blend in a polyurethane foam.

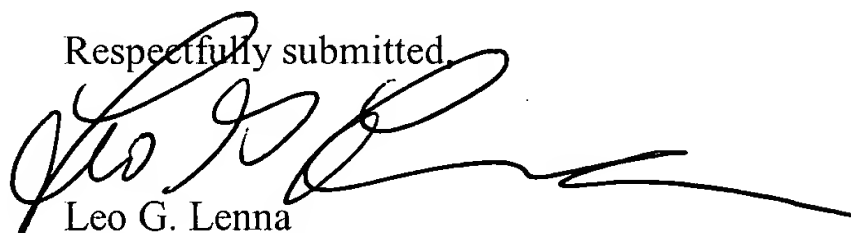
A polyurethane foam containing the 1:1 BTPP:PEEOP blend also showed a synergistic effect when tested in the MVSS 302 test. In this test, the theoretical amount

(calculated as described above) was 9 parts, and the actual amount required to pass the test was only 5. This again clearly demonstrates the unexpected synergistic flame retardancy effect of a polyurethane foam containing the aforementioned blend. The same synergistic effect shown in data set 1 is shown in data set 2 wherein the percentage of flame retardant in a polyurethane foam necessary to pass both the TB-117 test and the MVSS 302 test is less than the expected theoretical amount necessary to pass the same tests.

In the Office Action the Examiner stated that *"the applicants' examples have again been considered; however, the examples are not commensurate in scope with the claims, in terms of components species and amounts and ratio amounts."* (See Office Action p. 6, lns. 13-16). Although claims 15 and 16 included butylated triphenyl phosphate and poly(ethylethyleneoxy) phosphate, the combination found to have unexpected results, these claims recited a Markush grouping including additional compounds and therefore was much broader than the specific example found to have unexpected results. Claim 17 presented herein is limited to the specific ratio of amounts and the specific species recited in this example shown to have unexpected results. Support for this claim can be found in throughout the specification, specifically in the examples and in the claims as filed. No new matter has been added.

In view of the foregoing, claim 17 as presented is directed to a flame retarded polyurethane foam shown to have unexpected results and therefore is not obvious over the prior art of record. Accordingly, the application is now in condition for allowance and such favorable action is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Leo G. Lenna', written over the typed name.

Leo G. Lenna

Registration No. 42,796

Attorney for Applicants

DILWORTH & BARRESE, LLP.  
333 Earle Ovington Boulevard  
Uniondale, New York 11553  
Tel: (516) 228-8484  
Fax: (516) 228-8516

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